

**Amendments to the Claims:**

Please cancel claims 1, 6, 7, 11-13, and 15-17 without prejudice. Please amend claims 2-5, 8-10, 14, and 18 as follows. Please add claim 19 as follows. This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. Canceled
2. (Currently Amended) The method according to claim ~~1~~ 19, further comprising the steps of amplifying the polymorphous DNA microsatellite marker from the offspring of afflicted individual and comparing the length of the amplified marker with the length of the amplified polymorphous DNA microsatellite markers from steps (a) and (b).
3. (Currently Amended) The method according to claim ~~1 or 2~~ 19, further comprising the steps of amplifying two or more different polymorphous DNA microsatellite markers from the tumor and the blood.

4. (Currently Amended) A method for ~~the determination of data for the preparation of presymptomatic or prenatal diagnosis of phakomatosis~~ determining whether an offspring of an individual afflicted with a tumor suppressor gene disease has an increased risk of developing the tumor suppressor gene disease comprising the following steps:

- a) making available a tumor material of an afflicted individual who is suffering from the tumor suppressor gene disease,
- b) making available the blood of the afflicted individual,
- c) isolating the tumor DNA from the tumor material,
- d) isolating the blood DNA from the blood,
- e) amplifying at least two polymorphous DNA microsatellite markers from the tumor material,
- f) amplifying the polymorphous DNA microsatellite marker from the blood,
- g) separating by length the polymorphous DNA microsatellite markers from the tumor material,
- h) separating by length the polymorphous DNA microsatellite markers from the blood,

i) observing the length of the polymorphous DNA microsatellite markers from the tumor material,

j) observing the length of the polymorphous DNA microsatellite markers from the blood, and

k) determining the allele which is lost in the tumor.

5. (Currently Amended) The method according to claim ~~4~~ 19, further comprising the steps of amplifying the same polymorphous DNA microsatellite marker from the blood of the offspring of the afflicted individual and comparing the length of the amplified marker with the length of the amplified polymorphous DNA microsatellite markers from steps (e) and (f).

6-7. Canceled.

8. (Currently Amended) The method according to ~~any one of claims 1-7~~ claim 4 or claim 19, where the two polymorphous markers, of which there are at least two, preferably have a length of up to approximately 300 bp.

9. (Currently Amended) The method according to ~~any one of claims 1-8~~ claim 4 or claim 19, wherein at least three, or preferably four, different markers are used.

10. (Currently Amended) The method according to ~~any one of claims 1-9~~ claim 4 or claim 19, wherein the marker is a neurofibromatosis gene flanking or intragenic marker.

11-13. Canceled.

14. (Currently Amended) The method according to ~~any one of claims 1-7~~ claim 4 or claim 19, wherein the afflicted individual is a parent of the offspring.

15-17. Cancel

18. (Currently Amended) The method according to ~~any one of claims 1-7~~ claim 4 or claim 19, further comprising the steps of amplifying the polymorphous DNA microsatellite marker from the blood of an unaffected relative of the offspring and observing the amplified marker DNA.

19. (New) A method for determining whether an offspring of an individual afflicted with a tumor suppressor gene disease has an increased risk of developing the tumor suppressor gene disease comprising the steps of:

a. amplifying one or more polymorphous DNA microsatellite markers for the tumor suppressor gene disease from a tumor of the afflicted individual;

b. amplifying the one or more polymorphous DNA microsatellite markers from the blood of the afflicted individual;

c. comparing the amount and length of the one or more amplified polymorphous DNA microsatellite markers from steps (a) and (b);

d. establishing the loss of an allele in the tumor of the afflicted individual, based on the comparison in step (c);

e. amplifying the one or more polymorphous DNA microsatellite markers from the blood of an offspring of the afflicted individual; and

f. determining which allele of the afflicted individual was inherited by the offspring, wherein inheritance of the allele that is retained in the tumor of the afflicted

Application No.: Not yet assigned  
Preliminary Amendment dated October 24, 2003

individual indicates an increased risk of developing the tumor suppressor gene disease.